Consolidated Water Use Efficiency 2002 PSP
Proposal Part One:
A. Project Information Form

1. Applying for (select one):	☐ (a) Prop 13 Urban Water Conservation Capital Outlay Grant ☐ (b) Prop 13 Agricultural Water Conservation Capital Outlay Feasibility Study Grant ☐ (c) DWR Water Use Efficiency Project	
2. Principal applicant (Organization or affiliation):	Silicon Valley Pollution Prevention Center	
3. Project Title:	Industrial High Technology Closed Loop Pilot	
4. Person authorized to sign and submit proposal:	Name, title	Mr. Patrick T. Ferraro
	Mailing address	351 Brookwood Drive, San Jose, CA 95116-2742
	Telephone	408 291-0131
	Fax.	408 294-1239
	E-mail	SVP2Center@aol.com
5. Contact person (if different):	Name, title.	same
	Mailing address.	
	Telephone	
	Fax.	
	E-mail	
6. Funds requested (dollar amount):		$50,000
7. Applicant funds pledged (dollar amount):		$50,000
8. Total project costs (dollar amount):		**$100,000**
9. Estimated total quantifiable project benefits (dollar amount):		
Percentage of benefit to be accrued by applicant:		**0%**
Percentage of benefit to be accrued by CALFED or others:		**0%**

Consolidated Water Use Efficiency 2002 PSP
Proposal Part One:
A. Project Information Form (continued)

10. Estimated annual amount of water to be saved (acre-feet): **500**

    Estimated total amount of water to be saved (acre-feet): **5000**

    Over ___ years **10**

    Estimated benefits to be realized in terms of water quality, instream flow, other:

11. Duration of project (month/year to month/year): 1 year

12. State Assembly District where the project is to be conducted: 13,14,15,16

13. State Senate District where the project is to be conducted: 20,21,22,23,24,28

14. Congressional district(s) where the project is to be conducted: 10,11,13,15

15. County where the project is to be conducted: Santa Clara

16. Date most recent Urban Water Management Plan submitted to the Department of Water Resources: Jan 2000

17. Type of applicant (select one):
    Prop 13 Urban Grants and Prop 13 Agricultural Feasibility Study Grants:

- ☐ (a) city
- ☐ (b) county
- ☐ (c) city and county
- ☐ (d) joint power authority
- ☐ (e) other political subdivision of the State, including public water district
- ☐ (f) incorporated mutual water company

    DWR WUE Projects: the above entities (a) through (f) or:

- ☐ (g) investor-owned utility
- ☒ (h) non-profit organization
- ☐ (i) tribe
- ☐ (j) university
- ☐ (k) state agency
- ☐ (l) federal agency

18. Project focus:

☐ (a) agricultural
☒ (b) urban

Consolidated Water Use Efficiency 2002 PSP
Proposal Part One:
A. Project Information Form (continued)

19. Project type (select one):
Prop 13 Urban Grant or Prop 13 Agricultural Feasibility Study Grant capital outlay project related to:

☐ (a) implementation of Urban Best Management Practices

☐ (b) implementation of Agricultural Efficient Water Management Practices

☐ (c) implementation of Quantifiable Objectives (include QO number(s)

.....

☐ (d) other (specify)

.....

DWR WUE Project related to:

☒ (e) implementation of Urban Best Management Practices
☐ (f) implementation of Agricultural Efficient Water Management Practices
☐ (g) implementation of Quantifiable Objectives (include QO number(s))
☐ (h) innovative projects (initial investigation of new technologies, methodologies, approaches, or institutional frameworks)
☐ (i) research or pilot projects
☐ (j) education or public information programs
☐ (k) other (specify)

.....

20. Do the actions in this proposal involve physical changes in land use, or potential future changes in land use?

☐ (a) yes

☒ (b) no

If yes, the applicant must complete the CALFED PSP Land Use Checklist found at http://calfed.water.ca.gov/environmental_docs.ht

Application No. _____

FUNDING SOURCE (you may check more than one.)

SWRCB Programs		**CALFED Programs**	
*Watershed Protection Program		*Prop 13-CALFED Watershed Program	
Nonpoint Source Pollution Control Program		Prop 13-CALFED Drinking Water Program	
Coastal Nonpoint Source Control Program		CA Department of Water Resources	X

* Applicant must satisfy requirements listed in Attachment 2 "Special Considerations" and fill out the Small Community Designation Form.

RESPONSIBLE PROJECT DIRECTOR (one name only) (Ms., Mr., Dr.): Mr. Patrick T. Ferraro

PRINT SIGNATURE DATE

ELIGIBLE LEAD APPLICANT OR ORGANIZATION: The Silicon Valley Pollution Prevention Center

TYPE OF ENTITY:

Municipality		Local Agency		Nonprofit(landowner)	
Educational Institution				Nonprofit(non landowner)	x

STREET ADDRESS: 351 Brookwood Drive
CITY: SAN JOSE Zip Code: 95116-2742
P.O. BOX: Zip Code:
COUNTY: Santa Clara

PHONE NO.:408 291-0131 FAX NO.: 408 294-1239

E-MAIL ADDRESS: Svp2center@aol.com FEDERAL TAX ID. NO.: 77-0409331

PROJECT TITLE: Clean Water Parking Meter Campaign
PROJECT TYPE (See what activities qualify, Attachment 1)

LEGISLATIVE INFORMATION CA Senate District 10,11,13,15 CA Assembly District 20,21,22,23, 24,28
U.S. Congressional District 13,14,15,16

WATERBODY(S)/WATERSHED: (Refer to ARD, Section 5) Santa Clara Basin, Lower South San Francisco Bay

COUNTIES IN WHICH THE PROJECT WILL PRIMARILY TAKE PLACE:

Santa Clara

FISCAL SUMMARY:

Prop 13 Funds Requested	$ 50,000
Other Project Funds	$ 50,000
Total Project Budget	$100,000

CERTIFICATION

Please read before signing.

I certify under penalty of perjury that the information I have entered on this application is true and complete to the best of my knowledge and that I am entitled to submit the application on behalf of the applicant (if the applicant is an entity/organization). I further understand that any false, incomplete, or incorrect statements may result in the disqualification of this application. By signing this application, I waive any and all rights to privacy and confidentiality of the proposal on behalf of the applicant.

February 1, 2002

Applicant Signature Date

Patrick T. Ferraro, Executive Director The Silicon Valley Pollution Prevention Center

Printed Name of Applicant

Project Title: Industrial High Technology Closed Loop Pilot Project

Project Summary:
This proposal is for 2 industrial projects that will demonstrate the cost-effectiveness of combining water efficiency improvements, on-site recycling, and use of SBWR water. Such demonstrations will provide a solid basis from which to extrapolate participation rates and water/wastewater reductions, estimate a budget for incentives, and potential savings for Silicon Valley ratepayers.

The cost for developing the program and defining projects (Phase I) is $100,000. Project implementation (Phase II) is estimated to cost $2,500,000 for equipment and installation, and $250,000 for monitoring and coordination. The cost of Phase II will be shared between the City and the industrial partner. Documentation of project performance and program evaluation (Phase III) is estimated to cost $50,000.

A. Scope of Work: Relevance and Importance

1. Nature, scope and objectives of the project

Silicon Valley industry currently has no compelling need to improve water efficiency or to reduce wastewater discharges. On the other hand, the South Bay Action Plan requires that the City of San Jose reduce its discharges to the SF Bay, and the SCVWD is preparing for water supply shortfalls in the near future. Industrial demand for the City's SBWR reclaimed wastewater is much lower than anticipated because low-cost potable water is still readily available, a site-specific evaluation is required to determine the need for SBWR treatment, and higher quality process wastewater is usually available on-site.

The proposed pilot projects will confirm the technical feasibility and cost-effectiveness of site-specific measures to reduce industrial water demands and wastewater discharges. Site-specific measures include process efficiency improvements, on-site reuse and recycling, utilization of decontaminated groundwater, and finally, replacing as much potable water as feasible with SBWR. Confirmation of economic benefits means that any financial incentives from the City of San Jose and/or SCVWD need only cover a portion of implementation costs. It is very likely that such incentives will cost far less than providing additional potable water, and/or expanding SBWR for an equivalent volume (i.e. far lower unit costs).

Such an industrial incentives program would be an effective, and even unique, investment in economic development, reducing manufacturing costs in Silicon Valley while directly reducing costs for all ratepayers (rather than merely shifting the burden from one group to another).

An example of a pilot project would be a high-tech manufacturer with an on-site groundwater cleanup project. The increasing cost of Ultra Pure Water and critical need to reduce water related defects can justify an investment rinse-optimization and recycling (including drain segregation). Rinse-recycling can be increased to more than 90% with EDI to improve cost-effectiveness. With less demand for UPW makeup, only minor modifications are required to feed decontaminated groundwater to the existing RO system. With less RO reject, decontaminated groundwater can be applied directly to utilities such as scrubbers, ejectors, cooling towers, and landscape irrigation. Utilization of the groundwater reduces the very high cost of NPDES discharges to the storm drains. The site will probably need SBWR only during the dry season when groundwater flows are less and irrigation and cooling tower demands are high; this will displace the site's peak demand for potable water.

Looking at all operational savings (including electricity, natural gas, and chemicals), and recognizing that efficiency improvements can easily be added to capital projects that are already being implemented for other reasons, the payback can be very fast. Establishing a reliable performance baseline and determining whether equipment must be replaced or piping added is extremely important, and requires close attention to site-specific conditions. In practice this requires cooperation from a broad range of technical staff, and a coordinator assigned for the full duration of the project.

B. Scope of Work: Technical/Scientific Merir, Feasibility. Monitoring and Assessment:
1.Evaluation/Measurement of Success:
A successful demonstration project development will be measured
by its ability to:

- reduce volume, loading, and cost to discharge to the sewage collection system (directly measurable),
- reduce the volume and cost of Ultrapure water required for rinsing product(directly measurable),
- reduce the volume and cost of water purchased from the retail water supplier(directly measurable),
- reduce the annual energy, peak demand, and cost of electricity and natural gas required for the plant operations(directly measurable),
- reduce the overall unit cost for the product manufactured, once the payback period has elapsed(indirectly measurable)
- increase industrial application of South Bay Water Recycling (directly measurable)

2. Project Tasks Lists and Schedule:
Task I. Engineering/Economic & Impact Analysis

1. Review results from existing/previous projects from the City's Industrial Wastewater Reduction Program, SVP2C's Industrial Water Efficiency Program, and industry associations (e.g. International Sematech), to identify the feasibility of additional wastewater reduction measures. Prepare summary report estimating wastewater reductions, unit costs, and paybacks.
Estimated completion: 3 months

2. Identify possible demonstration projects with industrial dischargers and City staff.
Estimated completion: 1 month

3a. Prepare one implementation proposal, including site-specific estimates of costs and benefits to the industrial water user and SCVWD.
Estimated completion: 2 months

3b. Review groundwater cleanup costs, existing discharge permit, and possible use of treated effluent on site for beneficial uses. Prepare summary report estimating private and public costs and savings under different scenarios
Estimated completion: 1 month

4. Prepare and help negotiate funding proposals to other agencies and/or industry associations.
Estimated completion: 3 months

Task II. Outreach and Evaluation

Task II 1. Sponsor and coordinate an Industrial Water Efficiency Roundtable, in conjunction with an SVP2Center Board meeting, to include stakeholders and other members from the commercial industry sector, to review the technical and economic feasibility of specific flow reduction projects, generated in this project and other known hi tech water efficiency projects.
Estimated completion: 3 months

TASK II. 2. Publish a comprehensive proceeding of the Roundtable meeting and an Executive summary, documenting cost-effective and reasonably available water reduction technologies. Proceedings shall be made available to all co-sponsors of this study, both electronically for posting on web sites and in print, and/or in media(e.g.. CD ROMS) to be determined by District
Estimated completion:1 month

Long-term Funding Plan and Other funding solicitations:

The funding for Task 4 will depend, to a large degree, on the demonstration of cost savings, incentives, reductions in water supply and wastewater discharges, and payback period for the pilot projects designed. Incentives, in the form of reimbursements for water, sewage discharge and energy reduction should be available from the SCVWD, the POTW and PG &E to directly offset some of the capital and operating costs of the re-engineered water system for the manufacturing facility. These same organizations should also want to fund Phase III to monitor and evaluate that actual water and energy savings of the improved system once placed o

SANTA CLARA BASIN
WMI
WATERSHED MANAGEMENT INITIATIVE

2501 EMBARCADERO WAY, PALO ALTO, CA 94030
PHONE (650) 494-3819, FAX (650) 494-3531
HTTP://WWW.SCBWMI.ORG

February 15, 2002

California Department of Water Resources
Office of Water Use Efficiency
P.O. Box 942836
Sacramento, CA 94236-9674

RE: Pilot Study for Closed Loop Industrial Water Use

To Whom It May Concern:

On behalf of the Santa Clara Basin Watershed Management Initiative (Initiative), I would like to express our support for the Silicon Valley Pollution Prevention Center grant proposal to fund a Pilot Study for Closed Loop Industrial Water Use.

The Initiative is a collaborative stakeholder watershed management effort whose stakeholders include a number of municipal agencies, agricultural and business representatives, environmental groups, community organizations, and state and federal resource and regulatory agencies in Santa Clara County. The Initiative's mission is: "*To protect and enhance the watershed, creating a sustainable future for the community and the environment in the Santa Clara Basin*." Such a mission is aligned with the interests of the Urban Water Conservation Capital Outlay Grant.

The goal of the Water Use Efficiency Program is to accelerate the implementation of cost-effective actions to conserve and recycle water throughout the State. The Pilot Study for Closed Loop Industrial Water Use grant that the Pollution Prevention Center, in partnership with the Santa Clara Valley Water District, is applying for is designed to help achieve this goal and will help our service area by developing reliable, accountable, and cost-effective conservation programs for our area.

We encourage the California Department of Water Resources to consider funding this grant proposal.

Thank you.

Sincerely,

(original signed by)

Michael Stanley Jones, Chair
Santa Clara Basin Watershed Management Initiative

February 15, 2002

California Department of Water Resources
Office of Water Use Efficiency
P.O. Box 942836
Sacramento, CA 94236-9674

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Santa Clara Basin Watershed Management Initiative